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November 26, 2002

Ms. Marlene Dortch
Secretary
Federal Communications Commission
445 12th Street, SW, Room TWB-204
Washington, DC 20554

Re: Notice of Oral Ex Parte Communication, In the Matter of Review of the Section 251 Unbundling Obligations of Incumbent Local Exchange Carriers, CC Docket Nos. 01-338, 96-98 and 98-147

Dear Ms. Dortch:

SBC has recently submitted two *ex parte* filings in which the data it provides support the CLECs' positions on two key issues relating to CLEC access to unbundled local switching and UNE-P.

*First*, SBC's data show that, contrary to the ILECs' assertions, CLECs using residential UNE-P have not been engaged in "regulatory arbitrage" by targeting only customers in the most desirable rate zones. Rather, SBC's data show that CLECs have used UNE-P to gain customers across *all* rate zones in close proportion to the distribution of total residential lines across those rate zones.

*Second*, SBC's data support the CLECs' showing that use of UNE-L imposes significant costs on CLECs that incumbents do not face. In particular, they demonstrate that CLECs attempting to use UNE-L to collect concentrated customer loops (the architecture that SBC agrees is most efficient) face cost disadvantages of a *minimum* of $5 per line per month relative to SBC's own cost of serving these lines.

*UNE-P Implementation is Broad-Based* - In an *ex parte* letter SBC submitted on October 30, 2002, SBC provided a chart detailing, by zone, the number of residential lines served on UNE-P in each of its states. The first noteworthy point is that this chart indicates that 722,743 of these lines are in the "urban" zone; 1,161,735 are in the

"suburban" zone; and 949,920 are in the "rural" zone.[1] [2] Thus, there are fewer residential UNE-P lines in the allegedly most desirable "urban" zone than in either the "suburban" or "rural" zones. But the key question is not the absolute numbers of UNE-P lines in each zone; rather, it is how the distribution of residential UNE-P lines across these zones compares with the distribution of total (retail) residential lines across these zones.

SBC's data show that across all SBC states (weighted by the number of residential UNE-P lines in the state), UNE-P lines are distributed as follows: 25% in zone 1, 41% in zone 2, and 34% in zone 3. But AT&T estimates that the distribution of all retail residential lines across these zones in SBC states is 28%, 39% and 33%, respectively. Thus, zone 1 (urban) is slightly underweighted as to UNE-P penetration, and zones 2 and 3 are slightly overweighted. This suggests there has been no significant attempt by UNE-P CLECs (and certainly no great success) at targeting only customers in the urban zone and ignoring customers in less dense zones. Indeed, the empirical evidence is slightly to the opposite.

*SBC Admits CLECs Incur Significant Additional Costs in Using Their Own Switching* – AT&T has repeatedly demonstrated that it and other CLECs sustain very significant cost disadvantages in attempting to provide service using ILEC voice grade loops and their own switches.[3] This is because every CLEC customer's loop must be digitized, multiplexed, concentrated and backhauled so that it can be connected to the CLEC's switch. As a result, CLECs must establish and operate collocations, install and maintain costly loop carrier and transmission equipment and also use additional transport facilities to extend their customers' loops to their switches – all to replace the simple pair of jumper wires across the ILEC's main distribution frame.

CLECs face two different types of cost disadvantages in attempting to use their own switches to serve customers using ILEC voice grade loops. One is the cost for hot cuts, *i.e*., the non-recurring charges the ILEC imposes, together with the internal costs a CLEC must incur in connection with the manual transfer of a customer's loop in the local serving office (LSO). The second is the "backhaul penalty" a CLEC faces to transport its customers' calls from the ILEC LSO to its own switch.

AT&T's November 8 *ex parte*,[4] using only average collocation costs and assuming a *100% utilization* rate, showed that the "backhaul penalty" relating to the provision of switch-based service for customers that use voice grade lines is about $5 per month per line. Using more realistic fill factors and a range of collocation costs, the actual backhaul

[1] SBC's characterization of these zones as "urban," suburban" or "rural" is a misnomer. These zones are simply the "most dense," "next most dense," and "least dense" zones in a state. While in some states an urban/suburban/rural characterization of these zones may be accurate, in many states it is highly inaccurate. For example, in Illinois, only about 2% of residence lines are in the "urban" zone, while about 65% are in the "rural" zone. Conversely, in Kansas, about 58% of residence lines are in the "urban" zone, while about 12% are in the "rural" zone.

[2] These figures exclude the tiny number of SBC UNE-P lines (12 hundredths of one percent) that are in Missouri's "special" zone.

[3] E.g., "Promoting Mass-Market Competition: Facing the Analog Wall," dated November 8, 2002.

[4] *Id*. at. 11.

cost disadvantage ranges from about $7 to $20 per month per loop.[5] Even at the lowest end of this spectrum – and disregarding any costs relating to hot cuts – this results in a minimum penalty of 14% *based on gross revenues* for the small number of "high value" local customers that may average about $50 per month in revenues. And the penalty nearly doubles to 26% for the ordinary residential SBC customer that averages only about $27 per month in revenues.[6]

Until recently, the incumbents have been silent on these issues, asserting only that CLECs are not impaired in providing switch-based service to all customers because they have deployed a number of switches in various locations. Critically, SBC has now provided the Commission with data that validate AT&T's calculations above and support the conclusion that CLECs face an insurmountable cost penalty in attempting to provide service to customers using their own switches and voice grade loops.

In an *ex parte* letter SBC submitted on November 14, 2002, SBC asserted that "the provisioning of unbundled voice grade loops with special access transport should be implemented pursuant to rational engineering concepts," and that "it is *reasonable, efficient and practical* for CLECs to purchase loop concentration equipment for use in their networks" (emphasis added). In the attachment to that *ex parte* (at 8), SBC states that to collect these unbundled loops, "CLEC-deployed, collocated concentration offers greater efficiencies [than ILEC-provided concentration] and reduced cost."[7] SBC also provides estimates as to the extra costs that a CLEC will bear in order to (i) collect an already hot cut unbundled loop at an ILEC central office, (ii) digitize the signals on the loop, (iii) multiplex the loop with other unbundled loops, (iv) concentrate these unbundled loops and (v) transport them to an external wire center where the CLEC may maintain its Class 5 local switch.

As a threshold matter, SBC uses a variety of names to describe the network equipment that would need to be placed either at the ILEC central office or at a remote terminal location in order to digitize, multiplex and concentrate analog POTS lines. SBC variously calls such equipment "loop converters," "D4 channel banks," and most obtusely, "CLEC equipment." But these are all code words for the well-known piece of network equipment that engineers call a "digital loop carrier" system or "DLC."[8] DLCs are specially designed to handle these needs for analog POTS lines. In particular, a DLC receives an analog signal from a copper line, provides DC operating and ringing current on the line, digitizes the analog signals and multiplexes these now DS0 level signals to a DS1 or higher level.[9] If the DLC system operates at the Telcordia GR-303 standard, it also performs loop concentration by allowing for the over-subscription of its feeder circuits.

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[5] *Ex parte* letter from James C. Cicconi to Commissioner Michael K. Powell, dated November 13, 2002, at 22.

[6] *Ex parte* letter from Joan Marsh to Marlene Dortch, dated September 25, 2002.

[7] Although it seems like an obvious question, SBC's *ex parte* never explains why it is more efficient for the CLEC to perform this concentration than for the ILEC.

[8] See Telcordia *Notes on the Networks*, October 2000, sections 12.6-12.7 for a description of DLC systems and how they perform, on an integrated fashion, line digitization, multiplexing and (perhaps) concentration.

[9] In this regard, AT&T does not understand SBC's page 4 characterization of a POTS "loop converter" as a D4 channel bank. Channel banks are generally used to support voice grade special access lines – not POTS

In all events, the key information SBC provides in this *ex parte* is its cost data. In this presentation, SBC (at 7) suggests that the ILEC's cost for a "loop converter," which it appears to define as equipment that digitizes and multiplexes loops (*i.e.*, a DLC) is $400 per line. But on the very next page, the cost of this same piece of equipment purchased by a CLEC – which now also seems to have gained the ability to concentrate lines – falls to $150/line. In addition, SBC (*id*.) identifies additional "efficient" CLEC costs that include virtual collocation capital costs of $75/line, multiplexing capital costs of $12/line and transport link capital costs of $9/line.

These figures are problematic for several reasons. Although SBC suggests they are accurate for installations as small as 100 lines, this is patently unreasonable. There is no "100-line DLC" that costs only $15,000, and no virtual collocation housing such equipment that has an implied capitalized cost of only $7,500. Moreover, multiplexing and transport link costs greatly exceed the figure implied by SBC's accumulation of only $2,100 in capital. For example, the Commission's Synthesis Model costs out a 96-line DLC (slightly smaller than SBC's 100 line assumption) at common costs of $23,848.20 plus channel card costs of $87.30 per line.[10] Thus, a fully populated 96-line unit costs $32,229 – or $335.72 per line, more than double SBC's estimate.[11] If, as SBC proposes, the total capitalized cost for the virtual collocation of a 100-line DLC system plus ancillary equipment. is only $7,500, this equates to a monthly rental fee (assuming a conservative 0.22 annual charge factor) of only $137.50 per month for this collocation.[12] But in the real world, this figure likely would not suffice even to pay for the power charges that SBC imposes on collocators. Indeed, it is an *order of magnitude* lower than the least expensive virtual collocation that AT&T maintains with SBC.

SBC's assumption of $12 per line for multiplexing and $9 per line in capital for the transport link is also heroic. For 100 lines, this implies a $2,100 capital cost for the required DS1 channels. If a slightly greater than 4:1 concentration ratio is assumed, these 100 lines can be concentrated into a single DS1 channel.[13] Assuming an annual charge factor of 0.22 for this capital suggests that SBC believes that it sells individual DS1

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lines. AT&T knows of no way for a D4 channel bank to support the termination of analog POTS lines – without the placement of specialized line terminating equipment at the customer premises. See Telcordia, *op. cit*. at section 12.4. In particular, these channel banks do not provide the DC line power or ringing current needed to support analog POTS lines.

[10] All of the following calculations assume that these costs are for network equipment operating at 100% fill. To the extent that this equipment must be operated at fill levels below 100% (and in other proceedings SBC has certainly advocated this position), all of these per-working-line costs must factored up to cover the costs of this buffer capacity.

[11] Interestingly, this $335.72 figure is close to the of $400 per line figure that SBC states would be the ILEC's cost of performing these DLC functions.

[12] This analysis assumes that SBC has subsumed all of its monthly charges for the operation of this virtual collocation equipment into its stated capital figures. If the ILEC imposes additional monthly operations charges (e.g., for power or maintenance) the figures calculated here are understated by these amounts. The 0.22 annual charge factor assumes a weighted average cost of capital of 11.25%, a 10 year depreciation life, a 40% tax rate and 2% maintenance expenses.

[13] This is still giving SBC the benefit of the doubt. If a 4:1 concentration ratio (as assumed by SBC) is the maximum permitted, the full 100 lines need to be provisioned on two DS1s – doubling the costs.

channels for $38.50/month. This figure is less than one-quarter of the *lowest* SBC DS1 charges that AT&T is aware of.[14] All of the above demonstrates that SBC's figure of $246 in per-line capital costs for 100 digitized, multiplexed, concentrated and backhauled lines is fanciful.

SBC's figures are also substantially understated if they are applied to facilities that are sized to serve 500 lines. In this instance, SBC's $150 capital cost per line figure for DLC should be compared to the Synthesis Model's figure for a 672-line unit. This unit has a fixed common cost of $97,443.38 and channel card costs of $74.98 per line. These Synthesis Model capital costs for a DLC equipped with 500 lines then equal $134,933.38, or $269.87 per line[15] – slightly less than twice the SBC estimate. Virtual collocation capitalized costs of $37,500 for the 500-line installation equate to about $687.50 in monthly rent. This figure is *still* less than half the cost of AT&T's cheapest SBC virtual collocation. SBC's assumption of $12/line for multiplexing and $9 per line for transport equates to a total capitalized cost of $10,500 for the six DS1s required to serve 500 lines at a 4:1 concentration ratio. This equates to a monthly cost of $32.08 per DS1 – still less than one-quarter of the lowest SBC DS1 rate AT&T is aware of.

In sum, the costs set forth in SBC's ex parte are simply not credible. However, these severely understated costs *alone* are adequate to demonstrate that CLECs face severe cost impairments if they attempt to use unbundled ILEC loops together with their own switches to serve POTS customers. Even assuming that SBC's capital cost figures are correct, a CLEC must incur $246/line in capital costs to accept unbundled loops. Because the Commission's Synthesis Model finds average ILEC investment per line to be about $900, this extra $246 of CLEC investment required to access an unbundled loop represents roughly a *27% increase* in investment requirements.[16] By itself, this translates into a monthly recurring cost impairment of between $4.45/line (at RBOC financials, which are unreasonably optimistic for a CLEC) and $5.97/line (at financial assumptions that are more reasonable, but still very conservative, for a CLEC).[17]

But this capital cost disadvantage is *only a portion* of the total disadvantage facing the CLEC. In addition to paying for this capital, the CLEC must:

a) Pay the ILEC its hot cut fee and recover its cost over the life of the customer;

b) Incur its internal costs for accepting hot cuts

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[14] SBC's least expensive rate for an individual DS1 special access circuit (10 miles of channel mileage plus fixed channel mileage plus a channel termination) is roughly $180/month. More typical ILEC DS1 special access rates are in the range of $250/month.

[15] *Inputs Order* in Dockets 96-45 and 97-160 (released November 2, 1999), ¶¶ 269-285 and Appendix A, p. A-9.

[16] For the 95 nonrural carriers, the Synthesis Model finds $175,170 M in network investment (or $187,087 M in total investment that includes General Support Facilities) to provide 203 M customer lines.

[17] "RBOC" financials assume a weighted average cost of capital of 11.25%, a 10 year depreciation life and a 40% tax rate. "CLEC" financials assume a 15% weighted average cost of capital, a 7 year depreciation life and a 40% tax rate.

c) Pay the ILEC its monthly recurring charges for the loop cross-connect and

d) Pay its internal recurring costs of operating this collocation and backhaul network.

Even a hot cut fee of as little as $30, recovered over a thirty-month customer life, adds another $1 per month to the CLEC disadvantage. CLEC costs for accepting cutover loops – even if they are only half of the ILEC's cost -- are $0.50 per month.[18] ILEC-imposed monthly cross-connect fees add another $0.50 per month**,** and CLEC internal operations and maintenance expense for this elaborate loop collection network are easily $0.25. Thus, based on SBC's figures alone, a CLEC collecting unbundled loops at an ILEC central office faces extra costs of *at least* $6.70 to $8.22 per line per month. And if more realistic figures were substituted, the cost disadvantage would be much larger.

Finally, AT&T notes that the most recent RBOC assertion is that universal service will be endangered if CLECs are allowed to serve customers using UNE-P. But the Commission's most recent telephone penetration data show this gambit is also false. Over the past year, the same year in which UNE-P penetration soared, so did overall telephone penetration: from 94.6% up to its all-time high of 95.5% -- the largest one year increase since the Commission began tracking these data in 1983.[19]

In sum, SBC's own data now refute the incumbents' claims that CLECs are only using UNE-P to provide service in the highest density (and lowest cost) zones and they support the CLECs' demonstration that they face substantial cost disadvantages compared to the incumbents in providing POTS service using their own switches and ILEC loops. Indeed, SBC now appears willing to stipulate that its current manual hotcut/collocation/multiplexing/concentration and backhaul procedures for connecting unbundled loops to CLEC switches impose a minimum 27% increase in CLEC investment requirements. Such stipulated costs represent an undeniable, competition-killing impairment on CLECs' seeking to use their own switching to serve POTS customers.

[18] AT&T believes that the CLEC's internal cost of accepting manual hotcuts is roughly equivalent to the RBOC's cost of providing them. Thus, a more reasonable figure for this CLEC internal cost is $1.00 per line per month.

[19] See, http://www.fcc.gov/Bureaus/Common_Carrier/Reports/FCC-State_Link/IAD/subs0302.pdf . Indeed, more refined statistical analysis shows that the increase in telephone subscribership was greater in states with more residential UNE-P competition than in states with less residential UNE-P competition.

Consistent with Commission rules, I am filing one electronic copy of this notice and request that you place it in the record of the above-referenced proceedings.

Sincerely,

Joan Marsh

cc: Michelle Carey
Thomas Navin
Robert Tanner
Jeremy Miller
Dan Shiman
Don Stockdale